

Attorney Docket No.: 06137.0021.US02 (RU-0075)
Inventors: Anderson et al.
Serial No.: 09/181,601
Filing Date: October 29, 1998
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I. Rejection of Claims 1, 11 and 13 under 35 U.S.C. § 102(b)

The rejection of claims 1, 11 and 13 under 35 U.S.C. § 102(b) as being anticipated by Wallace et al. (Protein Science (June 1996) 5:1001-1013) have been maintained. Arguments presented in the previous response submitted by Applicants on June 5, 2000 were not found persuasive as the Examiner suggests that the different feature by which Applicants distinguish their invention, namely the size of the protein domain, it not recited in the claim.

Accordingly, in an earnest effort to advance the prosecution of this case, Applicants have amended claim 1 to specifically recite the size of the protein domain as 50 to 300 amino acids. Support for this amendment is provided in the specification at page 11.

Since Wallace et al. does not teach a method wherein polypeptide domains of this size are identified, this reference can not anticipate claim 1 as amended or claims 11 or 13 which depend therefrom.

Withdrawal of this rejection is therefore respectfully requested.

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II. Rejection of Claims 1, 5-9, 11 and 13 under 35 U.S.C. § 103(a)

The rejection of claims 1, 5-9, 11 and 13 under 35 U.S.C. § 103(a) as being unpatentable over Wallace et al. in view of Friedrichs et al. (J. Biomol. NMR (1994) 4:703-726) has been maintained. The rejection of claims 1-9, 11, 13 and 14 under 35 U.S.C. 103(a) as being unpatentable over Wallace et al. in view of Friedrichs et al. and further in view of Farber et al. (J. Mol. Biol. (1992) 226:471-479) has also been maintained. In addition, the rejection of claims 1, 5-11 and 13 under 35 U.S.C. § 103(a) as being unpatentable over Wallace et al. in view of Friedrichs et al. and further in view of Bagby et al. (J. Biomol. NMR (1997) 10:279-282) has been maintained. Finally, the rejection of claims 1-9 and 11-17 under 35 U.S.C. § 103(a) as being unpatentable over Wallace et al. in view of Friedrichs et al. and further in view of Farber et al. (J. Mol. Biol. (1992) 226:471-479) and further in view of Orengo et al. (Structure (August 1997) 5:1093-1108) has been maintained.

Applicants respectfully traverse these rejections.

MPEP § 2143 states that to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of

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ordinary skill in the art to modify the reference or combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references when combined must teach or suggest all the claim limitations.

As discussed in Section I, *supra*, the primary reference by Wallace et al. does not teach the identification of protein domains of 50 to 300 amino acids. Nor is there any suggestion of this step as Wallace et al. teaches use of a triad of amino acids. Accordingly, the primary reference fails to teach or suggest all the limitations as now claimed.

Secondary references cited in these obviousness rejections fail to remedy the deficiencies in the primary reference.

The teachings of Friedrichs et al. are related to an automated system for protein ^{15}N , ^{13}C , and ^1H NMR resonance assignments from a set of three-dimensional NMR spectra. This reference provides no teaching or suggestion of identifying a putative polypeptide domain that properly folds into a stable polypeptide domain of 50 to 300 amino acids as claimed.

Farber et al. disclose a neural network and information theory for determination of coding regions of DNA sequences. This reference also contains no teaching or suggestion with respect to

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identification of protein or polypeptide domains of 50 to 300 amino acids.

Similarly references by Bagby et al. and Orengo et al. fail to teach or suggest this claim limitation. As acknowledged by the Examiner, the teachings of Bagby et al. are related to preparation of samples for NMR analysis while the teachings of Orengo et al. are limited to the use of the CATH method for classification of protein domains.

Both the MPEP and the case law are clear; to establish *prima facie* obviousness of a claimed invention, all the limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974) and MPEP § 2143.03. Accordingly, since none of the prior art references teach or suggest the limitation of identifying a putative polypeptide domain that properly folds into a stable polypeptide domain of 50 to 300 amino acids, the cited combinations of prior art can not render obvious the invention as now set forth in claim 1 or claims dependent therefrom.

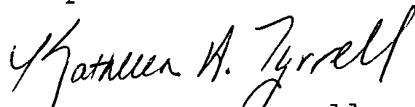
Withdrawal of these rejections under 35 U.S.C. § 103(a) is therefore respectfully requested.

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III. Conclusion

Applicants believe that the foregoing comprises a full and complete response to the Office Action of record. Accordingly, favorable reconsideration and subsequent allowance of the pending claims is earnestly solicited.

Respectfully submitted,



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